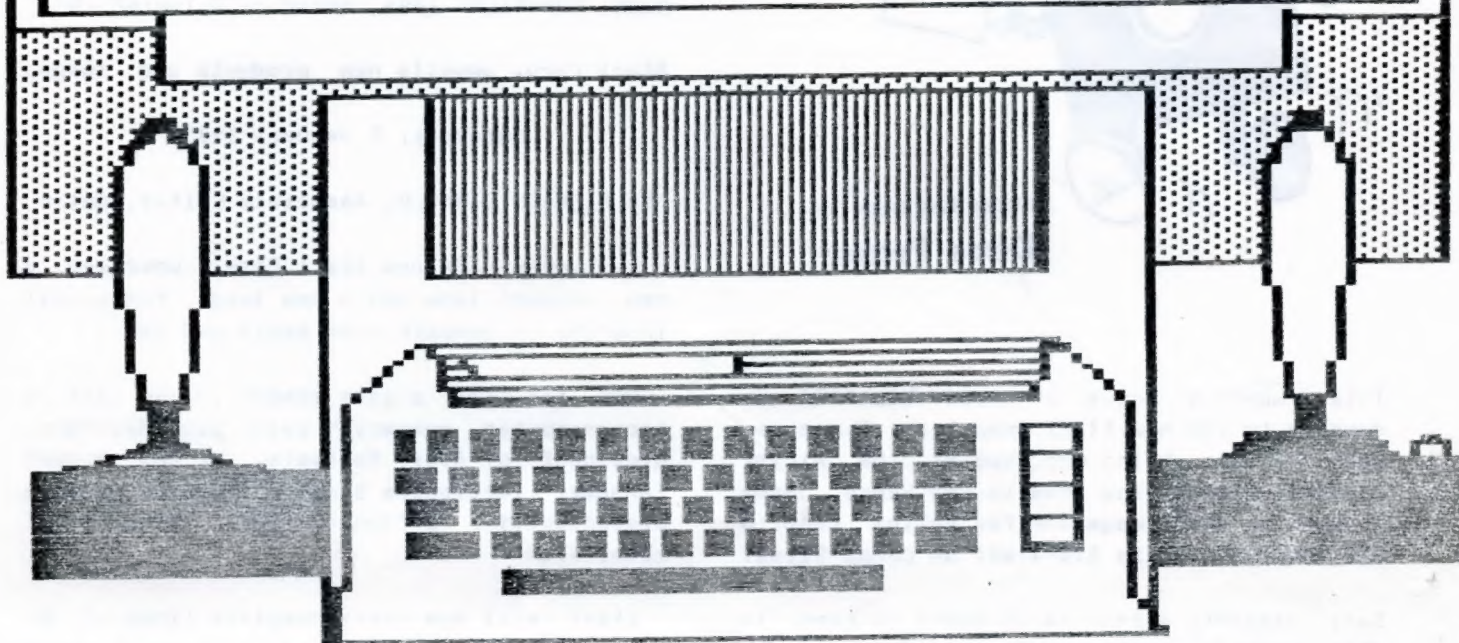


# MILATARI



COMPUTER ART BY DICK SKOVER

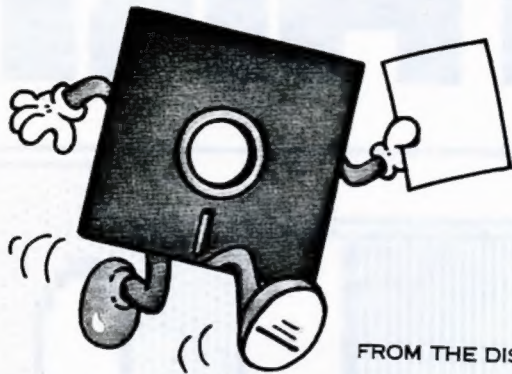
MILATARI NEWSLETTER  
Volume 4 Number 2

JANUARY 1985  
Price \$1.50

## Schedule

Jan 17th 7:30 PM	Board of Directors meeting Chris Stieber's home
Jan 19th 2:00 PM	MILATARI East meeting Armbruster School Workshop - Surge Protectors Annual Swap Fest
Jan 22nd 7:30 PM	ATR8000 SIG meeting Don Wilcox's home
Jan 24th 7:30 PM	MILATARI West meeting Waukesha State Bank Cassette tune-up





FROM THE DISK OF  
**Dave Frazer**

This month's issue of your MILATARI is devoted to the new ATARI computers. These new machines are being announced at the winter Consumer Electronics Show in Las Vegas. Many thanks to ANTIC magazine for making reports available to us via SIG\*ATARI on Compu-Serve.

Gary presents a preview of wants to come in this month's edition of the fuzzy Nolan review (Also known as 'PRESIDENT'S RAM' beginning on page 3).

We have a series of four articles provided by ANTIC. The first is a profile of the new 8-bit XE series and the MC68000 based ST series. Next is a report of the new EPYX and LUCASFILM partnership. A report on the GEM operating environment is next and we finish off the ANTIC series with an item on Jack Tramiel's comment on ATARI's philosophy towards software development.

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#### NEED ATARI REPAIR PARTS???

We have recieved information on two sources for ATARI repair parts:

Centurian Enterprises (803)544-6616  
P.O. Box 3233  
San Luis Obispo, CA 93403

American TV Sales and Service (415)352-3787  
15338 Inverness Street  
San Leandro, CA 94579

#### ANTIC REPORT 1

ANTIC SPECIAL BULLETIN, REPRINTED BY PERMISSION. COPYRIGHT 1985, ANTIC PUBLISHING INC.

**Atari Corp. unveils new products and image.**

Saturday, 5 January 1985

by MICHAEL CIRAOLLO, Associate Editor, Antic

Las Vegas--The new Atari Corp. unveiled a new product line and a new image today--all intended to compete with Apple and IBM.

"We are not a game company. We are a microcomputer company," said Sig Hartmann, president of Atari Software, at the Winter Consumer Electronics Show. "We will produce productivity software and educational material."

Atari will now carry complete lines of 8-bit and 16-bit machines, as well as an array of printers, monitors and other peripherals intended for users of Atari, Apple, IBM, Commodore and Texas Instruments equipment.

The XE line of 8-bit personal computers will include a portable 64K machine with built-in 5" monitor and 3-1/2 inch disk drive priced under \$400, a 128K computer priced under \$200, and a redressed version of the 800XL priced around \$100. All are said to be compatible with existing Atari software.

Two 16-bit computers, the 130ST and 520ST, are based on an 8 MHz MC68000 microprocessor, according to the company's announcement.

Packaged in sleek, low-profile cases similar to the Apple IIc case, the long-awaited "Jackintosh" Atari ST computers come with 128K RAM or 512K RAM, priced under \$400 and \$600 respectively.

Today's press conference was introduced by Nevada governor Richard Bryan, who has been



PRESIDENT'S RAM  
by Gary Nolan

**WE MADE IT!!**

Well 1984 came and went without any of the Orwell dream coming true. But a lot of other things DID happen during the year to make it interesting. Milatari continues growing, membership is up to 380 and still climbing. Atari was sold to ex-Commodore chief Fast Jack Tramiel. The expected price war was kind of one sided in that Commodore didn't want to play. Hey! Why should they? There were only TWO players in this game and a lot of people either thought or were told that one of them (Atari) was dead, or dying. Some people thought that the whole low end home market was dead. IBM while not admitting it was wrong, did change the keyboard and increase the memory on the PCjr. And guess what? It started selling! Apple brought out the IIc and repackaged the Lisa as a Super Mac. Commodore bombed out with its two new entries, the Plus 4 and the 16. Rumor has it that the 4 is dead and the 16 will drop to \$50 or be pulled from the shelf. '84 also saw the demise of a lot of software houses. And the Japanese still haven't made it in the marketplace. Wonder if they're having trouble booking passage or waiting for Atari and Commodore to kill each other off?

One of the biggest downers of '84 was Atari's cute "Who ME?" move JUST before Taricon.

One of the high points of the year was the increased involvement by Milatari members. But lets keep those cards and letters (articles for the newsletter) coming' in, and lets see more of you doing those great demo's and helping with the workshops.

**PULL UP A CRYSTAL BALL AND HAVE A LOOK**

What's up for '85? Who knows! By and large the home market was kind of dead. No action as far as hardware was concerned, 85 on the other hand looks like it will be interesting. It's a race between Comm. and Atari to see who can bring out a low cost color jr Macintosh. Commodore's Amiga and Atari's unnamed

unit should raise the interest of a lot of people, including IBM and Apple. And unless Apple is planning its own Mac-jr, it could find itself between a rock (Atari, Commodore) and a hard place (IBM). Forced to choose a market niche Apple may have gotten a high class self image, and consider the lower end of the market for "those" people. All this while IBM and the others eat up the small business and office market. Its going to be hard to convince the buying public that "those guys" are selling junk and we're the ones selling the good stuff. The American auto makers tried that a few years ago and permanently lost a large segment of their market.

Now is the time for Atari to strike and grab the initiative and the lead in the under \$1000 computer market. It wouldn't be that hard to do. Just market full featured machines at a reasonable price, back up those machines with decent service and continue to support it's users after they have the machines in their homes.

The information that follows was posted on CompuServe on Jan. 4th the day before the Winter CES was to start in Las Vegas. It was uploaded to the SIG\*ATARI section by ANTIC magazine and is a report on the new line of Atari computers that they were given a preview of at the Atari Engineering Center in Sunnyvale. I'll go over the highlights and, since we can't hold off publishing the newsletter until all the reports are in, urge you to attend the Jan meeting to hear a full report on what's new with Atari. Any of the prices are guesses for now as Atari would not give firm figures to Antic. But here's what they saw and heard.

Atari will introduce three XL compatible machines at CES. The 65XE is the 800XL replacement probably with 64K at about \$100. Then comes a 128K version, the 130XE at around \$200 with a transportable version of that coming in at near \$400. This last unit



## PRESIDENT'S RAM (Continued)

will probably be the Atari version of the SX64 from Commodore with built in color monitor and disk drive. The XE computers will use a brand new DOS 2.5 which is very similar to 2.05. The new DOS is necessary so the XE's can use both the 1050 disk drives and a new 3.5", 500K drive that Atari is bringing out. This drive is supposed to sell in the \$100 range according Sam Tramiel. I doubt that very much, \$250 to \$300 would be more like it. And at that price it would still be a good deal. The XE's are rumored to be running 6509 chips instead of the 6502's used now. These machines will look different than the XL'S and will look more like the new 16-bit machines but without the numeric keypad. The 16-bit machines will be based on the 68000 CPU (ala the Macintosh) and come in two flavors. The 130ST which is a 128K non-expandable machine and a 512K machine the 520ST. Both units sport 196K of ROM containing both GEM and CP/M 68000 from Digital Research. These will have a Selectric style keyboard with keypad, cursor pad, HELP and UNDO keys and 10 function keys. All this and ports galore including parallel, serial, MIDI musical interface and a processor bus. The much rumored 16-voice sound chip is not ready yet and will be added to Atari's computers later. The letter "M" will be added to the models that have it included. Atari won't start production on these systems until March, so they don't look for them on the shelves until mid-year.

Atari will be showing new printers and monitors at CES. These include a 12cps letter quality, 80cps dot matrix and three thermal (one color) printers. New Atari monitors include a \$100 monochrome with a built-in 80 col. card for the XL & XE computers. (Don't count on that price) Two color monitors are also coming, one is a \$200, 14" model that is comparable to the very good Commodore set. The other is a 640x200 resolution RGB model for around \$300. Also coming is a \$150, high-res (640x400) monochrome model for the ST computers. These prices sound realistic and

probable. They plan to show a monitor with a built-in drive and a low cost (\$50) modem bundled with software that will allow up/downloading. (What has technology wrought?? An Atari modem that can do these wondrous things!)

According to Sig Hartman, Atari's Software Division President, "Atari will be switching from a computer game company, to a micro-computer company." (Here, Here) "We will be very selective about games. Only publishing games that we believe have a real chance to become major hits." He also said that Atari will primarily publish entertaining and easy to use productivity programs. Hartman expected to sign a contract to bring out an integrated program similar to Lotus's 1-2-3 that would run on a 64K machine. Atari is developing AtariWriter Plus, which will include mailmerge and a spelling checker. It will run on one disk at 128K.

Hartman said that he is determined to reach out for user group feed back in the fast moving software market. He specifically wants major users groups to act as beta testers for new Atari software. (I'll believe THIS when I see it)

Stay in touch for more info from CES, be at the meeting and we'll pass along any more good stuff.

## PREDICTIONS? WHO ME??

Apple has to bring out a replacement for the IIe. If Commodore and Atari bring out a low cost Mac they'll be in trouble if they don't have something to help carry the load. Commodore could be in bigger trouble if they don't get the Amiga system out around the same time as Atari's. The Plus 4 and 16 are just not selling. The 16 is not that good a value for what you get. Even at \$50 it's questionable. That is if Atari has one with 64K at \$100. Coleco is gone, out of the market. That was announced shortly after the first of the year. They were never a player



January 1985

Page 2

# PRESIDENT'S RAM :: DISABLING BASIC

(Continued) :: BASIC

anyway. Who does that leave? Our boys in Sunnyvale! One false move and I'm afraid they're gone too. Atari is on a bubble that could burst and leave them flat. Dealers are a little wary them. They believe that Atari is one step from bankruptcy. They might also remember Tramiel's song and dance act from his Commodore days, done to the tune of "Promises Promises". Fast Jack and Sons could lose bigger than anyone else if they don't deliver the goods this year, and I don't believe they have more than this year to do it in. The industry press has painted Jack Tramiel as some sort of savior, sort of the Lee Iacocca of Silicon Valley. But I, like they, believe that if ANNEY ONE can pull it off, Fast Jack can. And I'm hoping that there are still some heroes left. After all Noran, or Nolan Bushnell has fallen on BAD times in never-never land. And you have to have somebody to root for.

## CONTEST....PT 2

Those of you who attended the December meeting saw some VERY GOOD programs demo'd by the authors. To all those that entered and won, CONGRATULATIONS!!! You ALL did a great job! One of the programs was called Snowy by Tom Wuttke and was a snowball fight game that was outstanding. The game has a few minor bugs which are being worked on, but it has been donated to the library by Tom along with two basic programs he wrote. One is a VTOC fixer and the other is a sector copier. Check these out at the next meeting I think you'll like them. Tom is being contacted by Broderbund Software and we'll know more about that later, but it sounds pretty interesting. Another big favorite was the time teaching program by John Gunther. This was very well done and we're still trying to talk John into donating it to the library. Roy Duvall and his son teamed up to do a great job. I thought his son provided excellent commentary during their showing.

As I said before ALL the participants are to be congratulated for their efforts.

by Dave Webster

ATARI BAY AREA COMPUTER USERS SOCIETY

This article was written for those people who own diskettes that boot binary files with an AUTORUN.SYS menu loader. I will describe how to boot without holding the option button!

The XL series enables and disables basic at address \$D301 HEX, 54017 DECIMAL. 400 800's usually use this address for the input of joysticks on ports 3 & 4. (Omitted from the 800XL!) The XL series users use this address for a variety of configurations. For example, bit 0 at \$D301 HEX says the operating system (READ ONLY MEMORY) is active or you are using the ram (RANDOM ACCESS MEMORY) below it. Bit 1 at \$D301 HEX says BASIC is enabled or disabled. One of the other bits at this address is used to tell if the DIAGNOSTIC rom is enabled or disabled. The normal values for \$D301 HEX are \$FF (BASIC DISABLED). All we have to do is add some instructions to the loader program to access ram and not BASIC. Thus, ridding you of the bother of holding the option button to disable BASIC! If you're familiar with machine code you might try adding something like the following: LDA #\$FF, STA \$D301. Since ATARI load files can have multiple segments (EACH ONE HAVING ITS OWN START AND END ADDRESS) and all files start with two \$FF bytes, you could specify that a file starts at \$D301 and ends at \$D301, and consists of only one byte (\$FF). This would put an \$FF byte at \$D301, enabling ram and disabling BASIC.

However, there is an easier way to do the same thing. The following steps will tell you how.

## FOR ATARI DOS 2.05

1. Boot DOS while holding the option button.
2. Put a diskette, containing the AUTORUN.SYS loader in the drive.
3. Hit the "E" option to rename the loader: AUTORUN.SYS,AUTORUN.OLD.



## ===== PRESIDENT'S RAM (Continued) =====

## ZZZZZZZZAAAAAAPP

This month's workshop covers surge protectors and how to build them for a reasonable price. We bought enough MOV's (the main component in SP's) to do thirty power strips. So if you've been thinking of buying one and are handy with a soldering iron stop in at the workshop next month we might be able to show you how to save a couple of bucks. Be there early to sign up for MOV's it's on a first come first serve basis. Radio Shack sells them for \$1.59 at last check, you can get them from us for a lot less.

## I'LL GIVE YOU MS PACMAN AND DONKY KONG FOR SPACE RAIDERS

Don't forget! January is the month for the Flea Market - Swap Meet. Bring all that software you no longer use or hardware you've outgrown and trade it or sell it to someone who needs it. It all starts at 2pm on the 19th, so be there.

## SUCH A DEAL

We will have more of the \$5 joysticks at the next meeting. Everyone who signed up on the first order picked up theirs and the extras went rat quick. There will be a few extras this time but only a few, soooooo.

We should have some Dysan SSDD disks at the regular price of \$1.30 each for sale. I say should because we ordered them with enough lead time but the way things have been going lately you never know.

Earlier on I gave you some information that was taken from the Atari sig of CompuServe. This just one of the features of this information service. If any of you are interested in signing up for this service let me know. We will be looking into getting a discounted sign-up package and would like to find out how many of you are interested. See me at the meeting or give me a call.

## ANOTHER ONE?

SWP has announced a new ATR, the ATR8500. Some of the differences between the old and new unit are as follows. The new one has a Z80 expansion bus, optional hardware DMA controller, will NOT run 8" drives, has a hardware as opposed to a software UART, has an optional hard disk controller and is more compact in size (it will fit on top of a 5 1/4" drive.) Oh yes! It also has TWO serial ports for those of you who want to hook it up to a terminal instead of your Atari and still use either a serial printer or a modem. It now comes in kit form for \$250 or in a full blown set-up in a case with two DSDD drives for \$1000. And for those of you who have been waiting for the hard disk system, your wait is over. A 5 meg system with controller, drive, case with fan cooled power supply and a special version of ZCPR-3 are included. CP/M software contains the utilities to do normal maintenance and initialization and Atari software has boot and format programs necessary to run under MYDOS. A special version of the standard boot prom for the ATR8000 is available to allow booting the system without using a disk. Retail for the system is \$895 from COMPCO, 9514-9 Reseda Blvd. #386, Northridge, CA 91324. For ordering info call Tom Miller at (818)366-6945 and for technical info call Tim Laren at (818)366-3178.

## DID I MISS SOMETHING??

At Atari's big news conference a couple of months back, Atari talked about their "NEW" ad campaign for the Christmas season that would feature "products not personalities". Now I admit that I don't watch a lot of television, BUT I know they didn't run only while I was indisposed or out of the house. Come to think of it, when was the last time you saw an Atari Corp. ad in a magazine? I just checked the last couple months issues of Antic, Analog, Compute and Creative and came up with nothing. I hope Atari isn't planning to sell by word of mouth.



## PRESIDENT'S RAM (Continued)

One thing we did miss this year was MILATARI's birthday, which comes either in May or November depending where you start counting from. The first meeting with a large (15/20) group of people was held in May of '81 and the group adopted the name of MILATARI at the November meeting at which we had almost 40 people. So at one of the upcoming meetings we'll vote for an official birthday for the group and start planning a birthday party. Hey! Any excuse is legal, right?

While we're talking about user groups birthdays lets wish SMUG, The Sinclair Milwaukee Users Group, a Happy Birthday! They're three years old this month.

## I'M TIRED FROM ALL THIS RUNNING

Now's the time to start thinking about the upcoming elections and who is going to run for what office. As you may know I will not be running for another term. Bylaws state that an officer can not serve more than two terms in succession and I'm at that limit. Actually I've served as Milatari's first and only president and it's time for a change. For both myself and the club. This is going to be a major election in that not only will the office of president be open but the offices of vice-president and secretary have to be filled also. The treasurer has not decided if he will run or not, but we're hoping that Steve stays on.

Since I'm not running, I've agreed to serve as chairman of the nominating committee. If you would like to run for any office, or would like to nominate someone for office call me. Remember the election will be held at the May meeting, so the nominations should be in and firm by the April meeting or at the very least before the May newsletter is printed. We need at least two people to serve on the committee with myself, so if you want to help give me a call. Remember what I said about one of the high points for '84? Make you feel like continuing the spirit? Good,

give me a call.

## LETS GET THIS STRAIGHT

Some people have been asking about Atari's warranty policy and how it works. It's really quite simple. You buy a piece of Atari hardware and if something goes wrong with during the first ninety days the seller replaces it. After that time you send it to Atari for repair or replacement. That's how it works in practice, but you may find some dealers that won't swap units even if it's ten minutes after the sale. So be sure that you or your friends clear up this point with the seller when you buy.

## WELL HELLO THERE

Had a call from the people from SUE, or RAIN, or what ever name your familiar with it as. They wanted me to pass along the information that SUE is up and running and if you paid for a subscription to the service you should call and check it out. It had a couple of rough moments a while back but is alive and kicking. So take hart friends, you didn't loose your money after all.

## PAY ATTENTION

Board of Directors Meeting .....

Chris Stieber's home, 7:30pm, Jan. 17th

Milatari East Meeting .....

Ambruster School, 2pm, Jan. 19th

CP/M Meeting .....

Don Wilcox's home, 7:30pm, Jan. 22nd

Milatari West Meeting .....

Waukesha State Bank, 7:30pm, Jan. 24th

See you on the 19th.  
BYE.....

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## ===== MOTOROLA MAGIC INSIDE THE ST COMPUTERS =====

The MC68000 is a 16-bit MPU with 17 general purpose 32-bit registers, a 32-bit program counter and a 16-bit status register. The first eight GP registers (D0-D7) are used as data registers. The next seven GP registers (A0-A6) and the system stack pointers can be utilized as address registers and pointers for software use. The data registers can be used for different data sizes. These sizes are: byte (8-bit), word (16-bit), and long word (32-bit) operations. The MPU has a 24-bit address bus (actually it is 23-bit address line and a hi byte and low byte select lines which gives you 8 megawords or 16 megabytes of memory) and a 16-bit data bus.

Five basic data types are supported by the instruction set. These data types are: Bits, BCD digits (4-bits), Bytes (8-bits), Words (16-bits), and Long Words (32-bits). The MPU has 14 address modes of six basic types: Register Direct, Register Indirect, Absolute, Program Counter Relative, Immediate, and Implied. The suprising thing about the 68000 is that it only has 56 instruction types and a total of only 88 actual instructions. The actual 16-bit op-code that the system uses is a combination of an instruction and an addressing mode, GP register number, an op-mode, instruction specific data, or any combination of the four. (instruction specific data is such information as shift direction, branch conditions, operation size, etc.) This provides you with over 1000 actual instructions, but keeps the total number of instructions small.

The MPU can perform ADD and SUBTRACT functions on BCD digits in groups of two digits. It can also MULTIPLY and DIVIDE binary numbers in these formats: 32-bit/16-bit=>32-bit and 16-bit\*16-bit=>32-bit. The signed DIVIDE is the slowest instruction to execute on the 68000. It takes 170 clock cycles or 21.25 microsec. at a clock speed of 8 MHz. This means that you could divide any 32-bit number in memory by any 16-bit number

in memory over 47,000 times in one second!! I hope that this file has given you a general idea of the power of the processor that the new Ataris will be using. If you are interested in more information, I would like to suggest a couple of books that are available. The first is published by Howard K. Sams & Co. and is called "68000: Principles and Programming" by Leo Scanion. You should be able to order this book though the Howard Sams section of CIS.(GO SAM) The second book I would like to recommend is "M68000 Programmers Reference Manual" available from Motorola Semiconductor Products Inc. P.O. Box 20912, Phoenix AZ,85036; document # M68000UM(AD4).

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## DISABELING 800XL BASIC (Continued)

4. Hit the "K" option to binary save AUTORUN.SYS at a starting address of \$D301 and ending address of \$D301. Type it like this: AUTORUN.SYS,D301,D301
5. Now, hit the "C" option to copy a file. This will be used to append AUTORUN.OLD to the just saved AUTORUN.SYS file. Like this: AUTORUN.OLD,AUTORUN.SYS/A

FOR OS/A+ OR DOS XL

1. Boot DOS while holding down option button. If you see the DOS XL MENU, hit the "Q" option.
2. Put a diskette containing the AUTORUN.SYS loader in the drive.
3. Type this command: RENAME AUTORUN.SYS AUTORUN.OLD
4. Type this command: SAVE AUTORUN.SYS D301 D301
5. Type this command: COPY - AF AUTORUN.OLD AUTORUN.SYS

You now can use this loader with any disk that has binary files on it. It will boot correctly without holding the option button down.



negotiating with Atari President Jack Tramiel to establish an Atari semiconductor factory in Nevada.

Negotiations for such an Atari plant are going well, according to Jack Tramiel, but have not been finalized.

Atari will also be actively entering the computer education area, traditionally the domain of Apple, according to Hartmann.

According to Atari, both machines will have 32K bit mapped screens. There will be a choice of three graphics modes: a 320 x 200 pixel, 16 color mode, a 640 x 200 pixel, 4 color mode, and a monochrome 640 x 400 pixel mode.

Atari claims both machines will have a range of 512 colors, with 8 levels each of red, green and blue.

According to the Atari, both computers will have a special sound chip capable of producing controllable frequencies from 30 Hz to super-sonic. There will be three channels, with separate frequency and volume control. Both machines will have interfaces to Musical Instrument Digital Interface.

The central processing units feature 8 32-bit data registers, 8 32-bit address registers, a 16-bit data bus, and 24-bit address bus, according to the Atari.

The operating system uses a graphics kernel developed by Digital Research (Pacific Grove, California), and the Graphics Environment Manager user interface from the same company.

The GEM gives users access to icons, windows, mouse control, a memory management system and a real-time clock.

Atari claims that both machines have a Centronics port, an RS232 port, interfaces for disk controllers, joysticks and mice. In

addition, there are apparently four video ports--television, composite video, RGB and high-resolution monochrome.

According to Atari's director of marketing, James Copland, the XE machines will be shipped "as soon as the old 800XLs are out of the pipeline," and the 16-bit computers will be on store shelves by April 1. The company is taking orders now.

#### ANTIC REPORT 2

ANTIC SPECIAL BULLETIN, REPRINTED BY PERMISSION. COPYRIGHT 1985, ANTIC PUBLISHING INC.

#### **Epyx Software teams up with Lucasfilm Games.**

Saturday, 5 January 1985

by MICHAEL CIRAULO, Associate Editor, Antic

Las Vegas--A new partnership was announced today as Epyx Software unveiled two games from Lucasfilm for the Atari market.

Ballblazer and Rescue on Fractalus, originally developed by Lucasfilm for the old Atari Inc, will now be marketed on 64K disks at a suggested retail price between \$29 and \$39, according to Epyx marketing director Robert Botch.

Although the two games were just announced, Epyx and Lucasfilm discussed a partnership for several months, signing the final agreement on New Year's Day, Botch said.

Both games were developed over six months ago, and there are numerous bootlegged copies around the country. However, those copies are not final products and differ from the games now being sold, said Botch.

Botch promised that the new partnership will produce further games from Lucasfilm. Two Atari games are currently under development and will be shown in June, he said.



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ANTIC REPORTS (Continued)

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What can we expect next? "All I can say is that they will be in the Lucas style--graphically different from anything currently on the market."

### ANTIC REPORT 3

ANTIC SPECIAL BULLETIN, REPRINTED BY PERMISSION. COPYRIGHT 1985, ANTIC PUBLISHING INC.

Sunday, 6 January 1985

by MICHAEL CIRAOLO, Associate Editor, Antic

Las Vegas--Officials from Digital Research Inc. said today their company has signed the first in a series of agreements with the new Atari Corp for DRI's GEM operating system extension.

This move, combined with DRI's commitment to independent software developers, is expected to bring a wide variety of software to the top-of-the-line Atari computers.

GEM (for Graphics Environment Manager) will run on the Atari ST line of 16-bit microcomputers, which are based on the 68000 microprocessor.

Noted for its ability to enable icons, pull-down menus, windows and mice, GEM also simplifies the job of the software developer, according to DRI's Tom Byers.

"Digital Research has taken graphics abilities into the software realm," said Byers. "With the new Atari, the furnishings--the windows, menus and so on--are included in GEM. The technological barriers to programming are gone."

Digital Research is currently working with about 10 independent software developers now, and will be hosting a seminar in February for about 150 major software developers.

Following next month's seminar, attendees,

attendees will be given GEM toolkits to aid in the development of 68000 software.

DRI's development software will allow independent software vendors to write software for the Atari ST machines on any MS-DOS computer.

Thorn EMI/Perfect Software, Chang Labs, Lifetree Software and Matrix have all agreed to write GEM software to take advantage of GEM's user interface, according to DRI officials.

Future software developers can look forward to seminars across the country, toolkits from DRI and one-year access to a toll-free telephone number for immediate technical support.

Because GEM works independently of operating systems and languages, it is compatible with PC-DOS (version 2.0 and up), MS-DOS and Concurrent DOS.

There is no specific development language for the new Ataris, although Byers recommended C.

Part of the GEM package is the Application Environment Services (AES) supplement. AES includes subroutine libraries to monitor and respond to user input from mouse movement, mouse button clicks, keyboard entry and so on.

Libraries also include software that lets a programmer write a menu in text form and have it translated into pull-down menu form, and several storage/retrieval managers to keep track of graphics, icons and the screen under a pulled menu.

Contrary to earlier reports, the ST operating system was developed specifically for the Atari, although it did have its roots in CPM 68000, according to Byers.



## ANTIC REPORTS (Continued)

**ANTIC REPORT 4**

ANTIC SPECIAL BULLETIN, REPRINTED BY PERMISSION. COPYRIGHT 1985, ANTIC PUBLISHING INC.

**Tramiel opens Atari up to software artists**

Sunday, 6 January 1985

by MICHAEL CIRAULO, Associate Editor, Antic

Las Vegas--Atari chief Jack Tramiel promised the Software Publishers Association that he would open Atari up to software developers.

"I'll open the new Atari machines up the way Apple opened up the Apple II," Tramiel said. "I need your help, and will give you any support you need."

Tramiel promised technical and financial support for those writing software for his new ST line of 16-bit, 68000-based personal computers.

The former head of Commodore also said he would try to put the new ST machines in the hands of software developers by the end of January, three months before the computers are available on retail store shelves.

Software publishers reacted with a wait-and-see, yet warm attitude to Tramiel's announcement.

Tramiel said he was expecting entertainment, business, educational and scientific software.

"We are serving everyone," Tramiel said, stressing that the ST line was a series of personal computers, not home machines.

Tramiel said he would give financial support to "any young man with good ideas who is starting a business. I'll give him some money for the work he's doing for us."

When asked about continued support for the 8-bit XE series, Tramiel told publishers that he would support an entire line of XE computers and peripherals as long as the consumer continued buying them.

Tramiel said that he had been working with Digital Research for over nine months on the ST design. He stated that Tramiel Technologies Ltd. would have brought the ST series to market, even if he had not bought Atari from Warner Communications. Tramiel said that the sophisticated consumer was "bored with the 6502 technology," and that the ST series was the "most exciting upgrade path" available at the lowest possible price.

At the end of the conference, Tramiel answered a question regarding disk drives with a very surprising quote. "Atari will be introducing a 15 Megabyte hard disk compatible for the ST series for under \$400 before June CES."

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**TECHNICAL SUPPORT GROUP**

The following members have indicated a willingness to assist MILATARI members with programming and other related technical problems. Please be polite and do not call these members during meal periods or at very early or very late hours.

William Lawrence	1-968-3082
Don Wilcox	228-1650
Erik Hanson	252-3146
Steve Booth	367-8739
Nick Liberski	782-5594
Gary Nolan	353-9716
David Frazer	542-7242



## REVIEW: SUPER STAR RAIDERS

by Shane Rolin

P.A.C.E.

Well, ATARI has done it again with their new game, SUPER STAR RAIDERS. This game took over 5 years to develop because of all the new functions. The game has a new type of graphics that ATARI calls "CYBERGRAPHICS". Cybergraphics are a special GTIA mode 10 PLUS. The ships and droids seem to actually come out of the screen at you. The sound also is unique because it uses both the keyboard speaker and 4 channel sound. The game comes in a 32K ROM cartridge and a data disk. The cartridge is unique because it contains 4-BK chips. The cartridge is slightly bigger and about 3 times the weight of your ATARI BASIC cartridge.

To play the game is also one-of-a-kind because you have to put the cartridge in, place the diskette in the disk drive, and turn the computer on. Suddenly you will see a title screen that says: "SUPER STAR RAIDERS (C)ATARI--LOADING DATA--PLEASE WAIT," at that time you will hear the disk drive start and you will hear the data being loaded in. Soon, there will be an opening display. The game then goes into the attract mode which shows the scoring values, game play, high scores, and instructions. The game has seven galaxies, and according to ATARI, over 1,000 different aliens and planets to shoot at. ATARI says an average game lasts two to three weeks depending on how you play. Thank goodness that ATARI decided to put a save game feature in the game, you would never be able to play that all in one shift!

The overall rating of this game is:

- 1) playability-----A+
- 2) graphics-----A+
- 3) sound-----B+
- 4) control-----C
- 5) design-----B
- 6) instructions-----B-
- 7) overall-----B+

The price of the game, according to ATARI will be in the \$50 to \$60 range. The instructions are good, but could be better. The game is worth the \$50, I'm going to buy it when it comes out in late June. I only have a special pre-release version to review. Here is a special tip on playing the game if you get it: When the first title screen mode comes up, press the ESC key and a 'Special Tips' screen will come up and tell you important tips on playing the game. The game is written by Al Neumann.

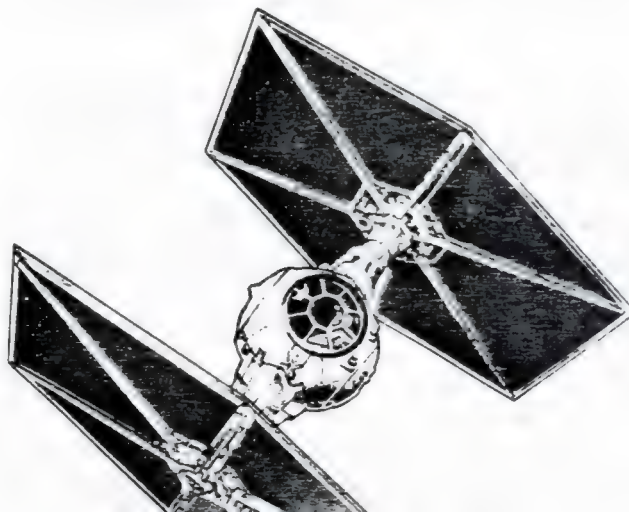
## Creating a Different Disk Directory

[The following is reprinted from ACCT (April, 1984), the newsletter of the newsletter of the ATARI Computer Club of Toledo. Author unknown.]

Thanks to Fred Choske for an answer to last month's question, "How can you create a disk directory for your programs other than in the standard location of sectors 361-368?" He referred us to a book from ALPHA SYSTEMS by George Morrison called ATARI Software Protection Techniques. Basically, the method is as follows:

1. Back up your completed disk.
2. Copy the directory to a new location.
3. Alter DOS to point to your new directory. DOS is stored in memory. Location 4226 normally contains 105, which tells DOS to look to sector 361 for the Directory. Compute the new value =  $105 + (\text{new directory sector number} - 361)$ . Then POKE 4226, new value.
4. Write the altered DOS files to your disk.
5. Destroy or change the old Directory, VTOC and DUP.SYS file.

The book, although small, contains a number of ways in which software is protected, and some small programs to enable you to accomplish this protection.





MORE ARTICLES/CEES REPORTS

**ANTIC REPORT 6**

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**CEES-ATARI FINAL WRAP-UP**

by NAT FRIEDLAND, Antic Editor

**LAS VEGAS** - The January 1985 CES show looked like the arrival of vindication for those who believed in the Atari Computer. The spectacular hardware and software shown at the crowded Atari exhibit was clearly superior and dramatically lower priced than anything brought by Commodore or the Japanese MSX contingent.

Model numbers - and to some extent, prices - still seem to be in a state of flux. But here is the best information ANTIC has as of now.

**16-BIT COMPUTERS** - The 130ST (128K) is \$399. A suddenly announced 260ST (256K) will be \$499. And the top of the line 520ST (512K) is \$599. The ST operating environment, GEM by Digital Research, will make it easy for software developers to transport programs originally written for the Macintosh and IBM PC environments.

**8-BIT COMPUTERS** - The 65XE which replaces the 800XL will continue at under \$120. The 130XE is "well under \$200" - or approaching \$150. We also had our first look at the 65XEP luggable, under \$400, including a 3 1/2" disk drive and a very clear 5" green monitor. These computers are all compatible with Atari's earlier 8-bits. When the polyphonic AMIE sound chip is finished around March, it's supposed to go into an alternate 64K machine to be called the 65XEM.

**DELIVERY DATES** for everything in this story is supposed to fall between 30 days and the start of the second quarter.

**PRINTERS** - \$150 for the slow (12 cps) but true letter-quality daisywheel, \$150 for the 80 cps dot matrix that produces graphics virtually as sharp as the Apple Imagewriter. \$150 for the 50 cps non-impact color printer

that produces very clear text, and \$99 for a black-only 20-cps non-impact model. All of these printers seem much sturdier and more professional than any printer that has ever carried the Atari name. They all work with both the 8-bit and the 16-bit lines, under different interfaces and model numbers. In fact, Atari printers and monitors will now be marketed for IBM, Apple and Commodore computers, under the Atarisoft name.

**MONITORS** - The XC1411 composite color 14" is under \$200. The XM128, about \$150, is the crisp 12" green monitor with built-in 80-column card that works with the new Atari software on XE computers. Specifically for the 16-bit ST line is the very impressive 12" RGB analog color monitor, SC1224 under \$300, that's capable of showing 512 colors on-screen. You can also get this model with a built-in 3 1/2" disk drive attachment. And there's an extra high resolution monochrome monitor, the SM124, for the STs at under \$200. The Atari exhibit area featured a wall of color monitors, which often displayed the spectacular graphics demos which Atari has been making available to users groups. Doug Crockford's BALL1 has been put on CompuServe by ANTIC. And Jim St. Louis' & Russ Karas' animated high-res robot and rocket ship are starting to be seen nationwide.

**DISK DRIVES** - The 500K SF354 3 1/2" drive is under \$200. And they are now also talking about a 250K 3 1/2" drive, the SF324, for around \$150. Not yet shown was the under-\$600 SH317 hard disk with 10MB, and there's also some discussion of a 15MB hard disk. Speed of all these new drives is announced as a phenomenal 1.3 megabytes per second for the STs. For the XEs they're hoping to boost the speed to 30,000 from the current 19,200. The 1050 disk drive will be gradually replaced for 5 1/4" floppies by the compatible XF521, around \$150, which has true double density and matches the new XE look. The new compatible Disk Operating System 2.5 was developed by Bill Wilkinson of OSS, the father of Atari DOS.

**TELECOMMUNICATIONS** - The \$49.95 XM301 direct-connect 300-baud modem is slightly larger than a cigarette pack and comes



bundled with software for uploading and downloading. The long-awaited Learning Phone cartridge for accessing Plato was featured, in-store availability should begin in February and the price may be as low as \$25. The Plato cartridge was also being demonstrated with MPP's new low-cost 1,200-baud modem.

## **ANTIC REPORT 6**

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### **CES-ATARI FINAL WRAP-UP**

by NAT FRIEDLAND, Antic Editor

#### **SOFTWARE BREAKTHROUGHS**

LAS VEGAS-Atari's CES software was in its own right as spectacular as the hardware breakthroughs on display. The star attraction was undoubtedly INFINITY - which is the next generation of sleek, powerful integrated programs.

Infinity has specs that are more than a match for Lotus 1-2-3 and Symphony. Yet it can run in as little as 64K (even on the old 800) with only the loss of a few extra features. And incredibly, it will be sold at only \$49.95 for 8-bit Ataris, the 16-bit version will be about \$70.

The Tramiel Atari Corp. has shown that it is serious about holding software prices to \$49.95, which is what virtually all the advanced productivity software described in this article will cost.

I realize that Infinity sounds almost too good to be true. But Antic has seen it in operation. On one disk it contains a spreadsheet, relational database, a word processor that looks like MacWrite, a telecommunications package, graphics, icons and pull-down menus, and integrated printing. It runs in virtual memory, which means that file size is more dependent on disk capacity than on RAM.

Infinity will support the upcoming Atari local area networking (LAN) capability. And

it includes multitasking -- up to 6 simultaneous operations on the ST series, 3 on the 130 XE and 2 on the 65XE.

Vincent Garafolo of Cambridge's Matrix Software, developers of Infinity, explained that they were able to get so much into a 64K memory program by two-step "optimizing" of the assembly language compilation. This procedure is usually only used in advanced military and government software.

"Most software companies don't do optimization because it's so tedious, even though it's possible to drastically reduce the size of most programs," explained Garafolo. "You don't have to be a programming genius to optimize. You just have to be willing to put in a few hundred hours of boring, painstaking line-by-line analysis."

Other impressive new software from Atari includes Silent Butler, a personal finance program that balances multiple checking and credit card accounts, and tracks tax deductions. Its most unique feature is the ability to print on your own personalized checks, using a plastic check-holder that fits into your printer.

Shopkeeper is an easy-to-use small business accounting package that also tracks inventory and generally emulates an electronic cash register. It also compiles daily reports which will be automatically transferable to the upcoming (2nd quarter) general ledger module. There will be six modules in the series.

Song Painter is a very user-friendly music construction program that replaces standard musical notation with self-explanatory colored line patterns and icons. Its three instrumental voices can be controlled almost entirely from the joystick.

In another Atari musical development, the in/out MIDI ports on the ST computers were being demonstrated driving the new Casio CZ101 \$499 synthesizer.



## ===== MILATARI INFORMATION PAGE =====

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This newsletter is written and printed by members of the Milwaukee Area ATARI User's Group (MILATARI), an association of individuals with a common interest in using and programming ATARI computers. MILATARI is not affiliated with the ATARI company or any other commercial organizations.

Your contributions of articles are always welcome. You may submit your article on ATARI compatible compatible cassette or diskette, on typewritten form or you can arrange with the editor to upload your file via modem at either 300 or 1200 baud. You can send GRAPHICS EIGHT or SEVEN PLUS screens stored on disk in a straight 62 sector binary file of the actual screen bytes. A MICROPainter file or binary file saved through +PICTURE PLUS+ will work fine.

Mail your articles and inquires to the editor at the return address on this newsletter.

## MILATARI

## Milwaukee Area Atari Users Group

MILATARI is an independent, user education group which is not affiliated with ATARI, INC. The newsletter is the official publication of MILATARI and is intended for the education of its members as well as for the dissemination of information concerning ATARI computer products.

MILATARI membership is open to individuals and families who are interested in using and programming ATARI computers. The membership includes a subscription to this newsletter and access to the club libraries. The annual membership fee is \$15 for individual or \$20 for a family.

Other computer user groups may obtain copies of this newsletter on an exchange basis.

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